THE AMERICAN BEE JOURNAL
CIRCULATES
ALL OVER THE WORLD
PUBLISHED BY
THOS. G. NEWMAN & SON,
CHICAGO, ILL.

THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. May 3, 1890. No. 18.

EDITORIAL BUZZINGS.

May Sun is bright—the air is clear,
The darting swallows soar and sing,
And from the stately elms I hear
Bluebirds and bees salute the spring.

☞ Shortly before one of the worst of landslides, at Plurs, Switzerland, on August 25, 1618, at 12 a.m., the bees left the hives.

☞ We want a Volume 2 of the AMERICAN BEE JOURNAL—July, 1866, to June, 1867. Any one having it for sale may send us a postal card, saying what he will take for it. Do not send any numbers before we order them, for we only need one set.

Bee-Keeping in Ireland is quite an important industry. Last year (1889) about 30,000 colonies of bees were kept there, which produced, in round numbers, 500,000 pounds of honey. Ulster country is the center of this growing and interesting pursuit. Verily, the "Emerald Isle" is sweet, as well as "green."

The Votes for the "National Flower of America" are very emphatically in favor of the golden-rod. Of all the votes sent to Mr. Prang, as requested, 70 per cent. are in for that golden beauty. This is another exhibition of the influence of bee-keepers, when they are properly united in creating an opinion favorable to the pursuit. It presents another proof that "in union there is strength." Now it will be presented to Congress by Mr. Prang, through some members of each body, and in all human probability the golden-rod will become "the National flower of America."

Bees and Fruit.—At the regular meeting of the Rhode Island Horticultural Society, held in Franklin Lyceum Hall on April 16, Prof. Samuel Cushman, Apiarist of the Rhode Island Agricultural Experiment Station, read an essay entitled, "The Relation of Bees to Fruit." The Providence *Journal* of April 17, 1890, gives the following as its report of the essay and the discussion following it:

Mr. Cushman illustrated his subject by charts, and spoke for about 40 minutes. He began by saying that he was a bee-keeper, and would present views attained by personal observation.

The essential and important point made by Mr. Cushman, was that bees were not injurious to growing or fair fruit, but that, on the contrary, they were beneficial to flowers and the bloom of fruit trees. In this belief he was supported by every member of the society present. Mr. Cushman referred generally to the process of development of flowers, and said that some fertilize themselves, some are fertilized by the wind, but the great bulk is fertilized by insects. The latter produce cross fertilization, a very important thing for plant life.

To illustrate his position, Mr. Cushman quoted liberally from celebrated writers on the subject of self and cross fertilization. Insects and flowers are benefited alike. He explained how bees get at the nectar of flowers and, the result of their action in inoculation. He referred to the various kinds of insects that get food from flowers and fruit. The habits of flowers correspond to the habits of insects, and both are indispensable to each other.

Kingston is celebrated for the variety and abundance of its flowers, and there are more bees there, than in any other section of the State. On certain islands where insects are scarce, very few flowers are found. Of all insects, bees are the most industrious, and flowers visited by them are the most attractive in every way. Insects materially aid the bloom of trees, and better fruit is obtained by reason of their visits. He said that the juice of fruit is injurious to bees, and that bees do not injure sound fruit in any way. They attack only bruised or juice-giving fruit, or fruit previously injured by other insects. Fair fruit is never harmed by them.

After the essay had been concluded, oranges and bananas were served during a short recess. When the meeting was again called to order, President E. J. Nickerson invited a discussion on the subject of the essay. L. W. Russell spoke briefly on the relation of bees to fruit, and of the important service rendered by the industrious insects. He moved a vote of thanks to Mr. Cushman for his excellent essay.

Henry T. Root said that he hoped the sense of the meeting would be taken, and if the views expressed in the essay were entertained by the members present, the society should endorse them with the vote of thanks.

T. K. Parker said: "Never destroy bees, for they are of great benefit to mankind." He also said that he had discovered another thing recently. Heretofore he was of the belief that the crocus was without seeds; he never could find any. There was a good reason why he could not, for cats eat them. The discovery was that cats are very fond of crocus seeds. In referring to bees, he said that he did not think they damaged grapes. Wasps he knew to be destructive to various kinds of fruit.

Dr. Timothy Newell said he never knew bees to injure fruit of any kind. George Hunt, J. L. Snow, and John Bowen testified to the same effect.

Action was now taken on the motions that the society endorse the statement that *bees do not injure sound fruit*, that they are *more beneficial* than harmful, and that a vote of thanks be extended to Prof. Cushman. Carried.

The above testimony of horticulturists, gleaned from the Providence *Journal*, should have great weight, and dismiss the subject at once and forever about bees being injurious to grapes. They are the fruit-growers' best friends, and should always be so regarded. As scientific light and knowledge increases, the wild ideas of ignorance and prejudice will vanish, and the bees will be honored for the important part they take in fertilizing the flowers, increasing the quantity of fruit, and gathering Nature's pure sweet—thus multiplying the pleasures of mankind, as well as adding to the material wealth of commerce.

Names of Officers.—Mr. J. W. Tefft, of Collamer, N. Y., makes these suggestions:

I should be pleased to see the AMERICAN BEE JOURNAL adopt a plan of keeping the names of the officials of the International Bee-Association and the officials of the National Bee-Keepers' Union at the head of the Letters at all times, so that we may know who and where to address our letters. The AMERICAN BEE JOURNAL is the official bee-paper of the world, and was never so powerful and valuable as at the present day. Its teachings in apiculture are that the one who can produce the greatest crop of honey is not the best apiarist, but it is that one who can effect it with the least experience. Its pages are an instrument of civilization—a safety lamp for all bee-keepers. It gives us all the *light*, but none of the conflagration.

We can very easily accommodate our readers in that matter, and will adopt the plan mentioned, at once. It appears on page 300.

One coincidence is worthy of note: The President of each is located in Michigan, and both Secretaries are located in Illinois—for the present year.

Honey Almanac.—John Craycraft, of St. Francis, Fla., gives this testimony in regard to the importance of circulating the Honey Almanac:

I have examined the Honey Almanac, and am well pleased with its contents. In making known the uses that honey can be put to, its circulation would certainly be a great help to the sale of honey.

☞ Jacob T. Timpe, of Grand Ledge, Mich., has mailed us a sample of his premium Italian bees. They are fine, large, yellow, and well marked; and are as lively as they are beautiful.

GLEANS OF NEWS.

Spraying for Noxious Insects.—Much information is now in demand concerning *when*, *how*, and *what solution* to use in spraying, to kill noxious insects. The following valuable article on this subject is from the *American Agriculturist* for May, and will answer hundreds of questions in the minds of our readers, or which have been sent to this office for reply:

The spraying-machine has become a recognized part of the equipment of the successful farmer and gardener. The uses to which it can be put are being increased yearly, and the indications now are that within a few years we shall be able with it to combat successfully the great majority of insects and fungous diseases attacking field, fruit and vegetable crops. There is a great variety of spraying-machines now on the market, the majority of which do effective work. The main points of a successful outfit are that the pump shall be strong, durable and easy to work, but throw a forcible stream; that the nozzle shall project a fine spray a considerable distance, and be so constructed that the size and quality of the stream can be regulated at the will of the operator. In these days, when so many people are using or getting ready to use copper-sulphate solutions as fungicides, it is desirable that the parts of the pump touched by the spraying-fluid be made of brass, as the copper solutions corrode iron.

INSECTICIDES TO USE.

A large proportion of the insecticides now in use may be applied with the spraying-machine. The most important of these are the arsenites, Paris-green or London purple; but there are also many others, including hellebore, pyrethrum, and kerosene emulsion, which are especially effective when applied in a water spray.

PARIS GREEN is a chemical combination of arsenic and copper, containing about 55 per cent. of arsenic. It is practically insoluble in water. For spraying apples, pears, cherries of the varieties resembling Early Richmond in foliage, and the so-called foreign varieties of plums, it may be used in the proportion of one ounce to 10 gallons of water, or a quarter of a pound to a 40-gallon barrel. It may be used against a large number of insects, including the codlin-moth, plum-curculio, canker-worm, leaf-rollers, potato-beetles, and, in fact, nearly all biting insects infesting plants to which poisons may safely be applied. The Paris-green-and-water mixture must be constantly stirred, to prevent the poison settling to the bottom of the vessel.

LONDON PURPLE contains nearly the same per cent. of arsenic as Paris green. It is cheaper, and remains in suspension better, but is generally considered to be more liable to scorch foliage. It may be used in the same proportion as Paris green, and is applicable to the same trees and for the same insects.

HELLEBORE is a vegetable poison, but much less dangerous than the mineral arsenical poisons, and it kills insects both by contact and by being eaten. It may be applied in water mixture, in the proportion of 1 ounce to 3 gallons, or a pound to a barrel. It is especially valuable for destroying the imported currant-worm, the cherry-and-rose-slugs. It usually retails at about 25 cents per pound.

KEROSENE EMULSION is made by adding 2 parts of kerosene to one part of a solution made by dissolving half a pound of hard soap in one gallon of boiling water, and churning the mixture through a force-pump with a rather small nozzle until the whole forms a creamy mass which will thicken into a jelly-like substance on cooling. The soap solution should be hot when the kerosene is added, but of course, must not be near a fire. The emulsion thus made is to be diluted before using, with 9 parts of cold water. This substance destroys a large number of insects, such as the chinch-bug, cabbage-worm, and white grub, and is a comparatively cheap and effective insecticide.

PYRETHRUM is an insecticide made from the powdered flowers of plants of the genus *Pyrethrum*. There are three principal brands upon the market, known as Persian insect-powder, Dalmatian insect-powder, and Buhach, the latter being a California product. The greatest obstacle to the use of pyrethrum has been the difficulty of obtaining the pure, fresh article. If exposed to the air, the poisonous principle volatilizes, and the powder is worthless. Hence, dealers should purchase a fresh supply each season, and should keep it in air-tight vessels. Pyrethrum is used mainly either as a dry powder or in water (1 ounce to 3 gallons), but may also be used in the form of a tea, or a decoction, a fume, or an alcoholic extract diluted. For use as a dry powder it may advantageously be diluted with 6 or 8 parts of flour. It is especially excellent for clearing rooms of flies and mosquitoes, and for killing the common cabbage-worm. It is practically harmless to man and the higher animals.

CROPS TO SPRAY.

The following crops are among the more important which may advantageously be sprayed to prevent insect injury:

APPLE.—Spray for codlin-moth and curculios soon *after blossoms have fallen*, when apples are from the size of a pea to that of a hickory-nut, with London purple or Paris green, one ounce to 10 gallons of water. Repeat application in a week or 10 days.

PLUM.—Spray foreign varieties (Lombard, Green Gage, etc.) soon *after the blossoms have fallen*, with London purple or Paris green, 1 ounce to 10 gallons of water. Repeat the applications once or twice at intervals of 10 days. Varieties of the Wild Goose class are almost as tender in foliage as the peach, and should be sprayed carefully, and with a weak mixture, if at all.

CHERRY.—If cherries are generally "wormy," spray Early Richmond, and varieties similar in foliage, with London purple or Paris green (1 ounce to 10 gallons of water) soon *after the blossoms fall*. Repeat the application once or twice at intervals of a week or 10 days.

PEACH.—If sprayed at all, this fruit should be treated very carefully. Do not use London purple, but rather Paris green, seeing that it is kept constantly stirred, and do not use a solution stronger than 1 ounce to 15 gallons of water. Spray late in the afternoon, *after the blossoms have fallen*.

CABBAGE.—To destroy the cabbage-worm, spray with pyrethrum, a pound to a barrel of water, at intervals of a week or 10 days, from the time the worms appear until the crop is ready to harvest.

New Catalogues and Price-Lists for 1890 are received from—

J. B. Mason & Sons, Mechanic Falls, Me.—16 pages—Bee-Keepers' Supplies.

J. H. M. Cook, 78 Barclay St., N. Y.—4 pages—Supplies for Bee-Keepers.

Foul Brood, so-called, is reported in many places, and F. I. Sage & Son, of Wethersfield, Conn., on April 24, 1890, write as follows:

We have read much about foul brood; still we know but little about its management. We would like to hear from some one or more as to what is the best thing to do now—this spring—to eradicate it from a yard. Will it not be better to begin operations before the bees get to breeding very much? or would it be best to make one grand pile of bees, hives and fixings, and have a grand illumination—in other words, are they worth fussing with? We would like to hear from those who have been successful in eradicating this disease from a yard.

Advice will vary by our readers; but our opinion is that when the disease has a good hold, it will not pay to "fuss" with cures. The best way is to commit the whole to the flames.

Luck.—Bees can be kept by most persons, but there are some so careless and negligent that they would have "no luck." These "bad luck" fellows cannot have a garden, for the weeds grow up and choke it; no corn, for the hogs will get in and destroy it; no wheat, for the cattle tramp it down on account of poor fences; while the bees will not succeed as well as these others, on the "let alone" plan.—*Selected.*

☞ In our notice of the loss by fire of G. B. Lewis & Co.'s factory last week, we relied upon the telegraphic reports in the daily papers, when stating that their stock of hives, sections, etc., were all destroyed. We find that they had a large stock stored in a warehouse which was not destroyed, and are very glad to make this correction.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, postpaid.

Convention Notices.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, *Sec.*

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 20th, 1890. D. A. FULLER, *Sec.*

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, *Sec.*

☞ The next annual meeting of the York and Cumberland Bee-Keepers' Association, will be held at Buxton Centre, Maine, on May 10, 1890, sessions at 9 a.m. and 2 p.m. An interesting programme is assured. A cordial invitation is extended to all interested to be present. C. W. COSTELLOW, *Sec.*

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, *Sec.*

QUERIES & REPLIES.

Folding the One-Piece Sections Together.

Written for the American Bee Journal

QUERY 705.—1. How do you fold together one-piece sections? 2. What speed do you, or your helpers, make?—Indiana.

1. With a hammer.—MRS. L. HARRISON.

I use nailed sections.—G. M. DOOLITTLE.

I use only four-piece sections.—R. L. TAYLOR.

1. By hand. 2. I do not know.—J. M. HAMBAUGH.

We use only the 4-piece, dovetailed, whitewood sections.—C. H. DIBBERN

1. By hand. 2. "Lightning speed."—A. B. MASON.

1. I use a press. 2. I have never timed it.—A. J. COOK.

1. By dampening and carefully folding, commencing at the end. 2. I could not say.—WILL M. BARNUM.

1. With a wooden mallet. 2. This work is mostly done by boys; 3,000 would be a good day's work, allowing 10 hours to the day.—J. P. H. BROWN.

1. I use but few one-piece sections, but the 4-piece. I have 2, and sometimes 3, boys at work putting up sections. 2. I do not remember how many they put up per hour.—H. D. CUTTING.

I use so few that I require no help, and have no occasion to time myself as to speed. I use the all-in-one-piece sections, and put them together without the use of a machine.—J. E. POND.

One of my boys has always done this work. I do not know what speed he attained. He is now away attending school, hence I cannot ask him.—EUGENE SECOR.

I do not use 1-piece sections. Small boys can put together from 400 to 500 4-piece sections a day. It does not pay the bee-keeper to put together sections, if he has anything else to do; but it is just fun for the boys.—G. L. TINKER.

1. Without any machinery, simply *pushing* them together with the hands. 2. My son puts together 21 in a minute to show off, and 16 a minute when doing a day's work. It takes a strong grip, however, to do this, and use no mallet.—C. C. MILLER.

1. It is said that a mother-bear, teaching her son to walk, said: "The way to walk is to *walk*." I put them together in the only obvious way. To prevent them from breaking, I pour boiling water on the outside, opposite the grooves. 2. I have not used a great many, and do not know how many I could put together in a minute. I can nail 4-piece sections more rapidly than I can put the 1-piece sections together, and I prefer them.—M. MAHIN.

1. My method is as follows: A sponge is used to moisten the wood; the sponge is then drawn across the back of the V-cuts; as this is done, the pieces are stacked up in front of the operator. When putting together, the piece is laid flat on a solid dressed surface, with the broad end toward the operator. The folding is done from the end pointing toward him. When the dovetailed ends are brought in position, a blow or two of the hammer finishes the job. If not too dry, the sections will fold without the sponging, but the box is much stronger if the sponge is used. 2. I do not time myself. A man, or woman either, will live longer by keeping cool both in body and mind. Do not time yourself—just work steadily on.—G. W. DEMAREE.

Never use 1-piece sections. I would not take them as a gift, of any manufacture. They are made of basswood, the joints are bad, liable to breakage, and, that is not the worst of it, the openings between the sections should always go clear through from side to side, and basswood is not fit to make sections of, anyway, because it soils and daubs with honey and stains so easily. White poplar is the thing, and it does not work at all on the 1-piece plan. It is not the right kind of wood, but it is just the right kind of wood for sections, every other way. I pay 50 cents per thousand for driving together, perfect and square, the 4-piece sections, dovetailed at all corners; and a small boy who is glad to earn 50 cents a day, will readily put a thousand together every eight hours.—JAMES HEDDON

Use a "press" made for that purpose. The speed of doing it varies according to the temperament and capacity of those doing the work.—THE EDITOR.

CORRESPONDENCE.

INCREASE.

Prevention of Swarming Without Loss to the Bee-Keeper.

Written for the American Bee Journal

BY DR. C. C. MILLER.

I have received the following letter for reply, which fully explains itself:

DEAR SIR:—Last fall, at the meeting of the Northwestern Bee-Keepers' Society in Chicago, we had a short conversation. In answer to my question in regard to your experiments during last season, in caging the queen for 10 days at the opening of the swarming season, you told me that the readers of bee-literature would get what you knew on the subject, before spring. Not hearing from you, I take the liberty of writing to you in regard to the matter.

The finding of some plan whereby increase can be avoided without loss to the bee-keeper, is a matter in which many are interested. What do you think of giving each colony a hatching queen-cell at the removal of the old queen? By thus doing, a colony has a new laying queen in about 10 days, but is queenless for not so long a time. With hives on scales, and otherwise, my experiments in this matter point quite conclusively to the fact, that a colony of bees, queenless or with a caged queen, but having eggs and brood left them whereby another mother can be reared, do not gather as much honey during the queenless state, as before, or after; nor do I find them doing as well with a virgin queen present, as with a fertile one. How does my decision agree with yours?

The question in my mind has been, "Does not the bee-keeper lose more dollars in the form of ungathered honey, by preventing increase, than he would expend in purchasing new hives and allowing a moderate increase?"

Bees have wintered well in this locality. A part of my colonies were put into the cellar repository in October; the remainder a month later, and all came out in apparently the same condition, with the preference, if any, for early putting away. I like the plan of wintering without the hive-bottoms. Your opinion in regard to the queen-caging operation will be most gratefully received. J. C. WHEELER.

Plano, Ills., March 31, 1890.

You say well, that "The finding of some plan whereby increase can be avoided without loss to the bee-keeper, is a matter in which many are interested." Years ago, the great *desideratum* with many was increase. Gradually the question arose, "How can we profitably prevent increase?" and this has changed in the minds of many to the inquiry, "How can we profitably prevent *swarming?*" The two questions are quite different, and to the last I have as yet seen no satisfactory answer, although it is more and more coming to the front.

My experiments in caging the queen were really to prevent swarming, although, of course, whatever prevents swarming, prevents increase. Instead of caging, I generally took away the queen and put her in a nucleus, although I do not know that it makes any material difference, so far as the old colony is concerned, whether the queen is caged, or taken away. I took the queen away before I thought the colony had got ready to swarm, destroying the queen-cells if any had been started. Within 6 or 8 days all sealed cells were again destroyed, and again within 10 or 12 days from taking the queen. This left it impossible for these bees to swarm, providing all cells were destroyed as I have stated, But it is not an easy thing to make sure that no cells are missed, and so many were actually missed in my case, that I can hardly say I am satisfied with the plan. Please remember, however, that such men as Messrs. Hetherington and Elwood are so well satisfied with the plan, that they use it, and their success outweighs my failure.

Now you will want to know whether the bees did as good work in the absence of the queen? Candidly, I do not know. Mr. Elwood claims that he finds the bees working with even more than their wonted vigor after becoming hopelessly queenless. I certainly know that in some cases I have seen bees do excellent work when they had neither queen, brood, nor queen-cell in the hive. Still, I have some lingering doubts whether bees will, in the long run, do just as good work if kept for a time queenless, as they will when a queen is present through the entire season, and no desire arises to swarm. But in this last consists the trouble—they are pretty sure to want to swarm, and this may be worse than being queenless.

Just how you would like your plan of giving a hatching queen-cell on removal of the old queen, you can only tell by trying. Bees have such a way

of turning up-side down, plans that seem to have no possibility of failing. But I am afraid that you will not like the plan. I am afraid that your colonies, in most cases, will swarm, and if they do, I hardly see what you will gain. The only difference would be, that, in this case, the swarm would come off with a virgin instead of a laying queen.

So long as you have raised only the question of prevention of increase, and not prevention of swarming, let me give you a plan that I used with a good deal of satisfaction, viz:

When a swarm issues, cage the queen (her wing must be clipped, of course), and either immediately, or at any time when it suits your convenience within 2 or 3 days—possibly you might wait several days—proceed to operate as follows:

Take out of the hive every comb that by any possibility might contain a queen-cell, and put these combs in an empty hive, shaking off about half the bees, the idea being to leave on these combs just as few bees as you think can take care of the brood. Generally I took all the combs the colony had. In the old hive you must leave or put anywhere from 2 brood-combs to the hive full. These combs may be without brood, but I suspect it is better that they should contain brood, and at least part of it eggs or brood just hatched. This gives the bees a chance to rear queen-cells, and if you want any, you may count on these being good. Now put back the super and cover up the hive just as it was, and put the new hive on the top of the old one. Put the queen in this upper hive, and leave them thus for 10 or 11 days. At the end of this time lift off everything from the stand, and put on it the hive containing the queen. If in the first place you had filled it with combs, you have nothing to do now but put it on the stand without taking out a frame, otherwise you must fill it up. Put on the supers, and you are done with that colony for the season, unless it should again swarm, when you are to repeat the first treatment.

You may ask me, what about the queen-cells that were left in the hive on top? Well, you have nothing to do with them. Let them alone, and the bees will destroy them just as well as you could—in fact better, for they never miss any when they hunt for them. You see there are not enough bees in the hive to make them want to swarm, and, what is perhaps more to the point, there will be little or no honey brought into the hive for a day or two, and I think that the bees will not swarm when such is the case.

The hive taken away from below may be put in a new place as a nucleus, and in a day or two it will have a young queen, or its contents may be distributed wherever they are needed.

During the time the hive was on top, a number of bees have marked that as their location; after the upper story is taken away, these bees, when they come back from the field, will fly about confusedly, then settle in a cluster on the cover, and soon some one of them will find the entrance to the lower hive, when the whole crowd, like a flock of sheep, will march down the front of the hive to the entrance below.

Marengo, Ills.

BEE-ESCAPES.

Priority of Invention of the Latest Device.

Written for the American Bee Journal

BY JOHN S. REESE.

While bee-escapes seem to be one of the absorbing topics of the present, and knowing from experience that discussions bring such valuable devices to notice, let us have it out before we get busy.

Mr. Dibbern's article in the AMERICAN BEE JOURNAL under date of Dec. 14, 1889, certainly proves the introduction of horizontal escapes (used inside the hive), and I do not call to mind that any one has yet doubted it. His letter to me, dated Dec. 3, 1889 (11 days before his introductory), and published in *Gleanings* for Jan. 1, 1890, will also prove beyond a doubt that I was the first to write for publication the plan of placing an escape inside a hole in the honey-board. Mr. Dibbern's article and my own were brought together in *Gleanings* by my special request, so that each should have full credit. Here is the letter:

DEAR FRIEND REESE:—Your welcome letter of yesterday, together with your model of bee-escape, is just at hand. I am much pleased with your escape, and I know it will work perfectly. In so far as there are no projections, it is perhaps an improvement on mine. Still, as all modern hives have bee-spaces, I see no objections to it on that account.

Again, when used for an inner cover, yours could be covered by a piece of tin, while mine would have to be removed, unless there was a full bee-space in under the board, in which case it would be necessary only to plug up the hole, and turn it over. I presume it will require a season's experience to decide which is really the better—I admit that yours is an ingenious arrangement—something that I tried to conceive, but failed.

Since writing you before, I have made a board with a center escape, and it is a beauty; still, I do not know that it is any improvement on the single-exit escape.

C. H. DIBBERN.

Milan, Ills., Dec. 3, 1889.

Now ought not this to settle the matter? The thickness of the board (provided it is as much as a bee-space) cuts no figure at all, neither does the outlet to the escape. The writer conceived the idea of placing the horizontal escape in the board, and flush with the top and bottom, and gave it to the readers of bee-papers, and his thoughts have ever been to make it simple, inexpensive and easy to make—one that any bee-keeper ought to make from the picture, and certainly after seeing a model. He is not in the supply business, and would like to see every one make and use them.

The models that I have been making are in a thin block, 5-16 of an inch thick, 3¾ inches wide, and 6½ inches long. This oblong, square escape (model) can be let into any thickness of honey-board, and is as readily movable as any escape ever made; but you will not want to move them.

As regards testing escapes with the robbing plan, and preventing robbing, I gave that plan as far back as two years since—no style of escape will clear a super of bees in their regular, every-day condition, as quickly, or as clean, as we would like it done, unless we induce the robbing state, then any style (not excluding the old, reliable, single, vertical cone) will clean the super so quickly that we will be surprised.

Many of us will test escapes this season, and I predict success for the horizontal kind; and the writer would like to hear from those who fail, as he thinks that he can set them right. Be sure to protect the supers from the sunshine, when the escapes are used.

Winchester, Ky., April 19, 1890.

HONEY-PLANTS.

Some Observations on Various Plants for Honey.

Written for the American Bee Journal

BY JOSHUA BULL.

I was much interested in reading Dr. C. C. Miller's remarks on the subject of "Farm land for honey alone," on page 214, and it prompted me to offer some of my observations and conclusions concerning honey-plants and their probable value. Although my experience has not been very extensive in the cultivation of plants for honey only, yet for the last five years I have been experimenting in a small way with a few varieties of plants, and from the result of those experiments I submit the following:

SPIDER-PLANT.—When all conditions are right, it will yield large quantities of very thin nectar, which can be seen in early morning amid the stamens of the flowers, but on account of the

peculiar construction and openness of the blossoms, even a very gentle breeze of wind will shake the nectar all out of them in an incredibly short time; or, when the sun shines out brightly, the nectar disappears with the morning dew. The bees do not notice it through the middle of the day. Therefore, I conclude that the spider-plant is of but little value for honey, especially in localities much exposed to wind.

CLEOME, OR ROCKY MOUNTAIN BEE-PLANT.—This is a rank, thrifty-growing plant in this soil, and evidently yields considerable nectar; but the plant and flowers have a very disagreeable odor, which appears to be imparted to the honey which it produces. Two years ago I had a row of cleome growing about five rods long, and the plants branched out and formed a complete mass from 6 to 8 feet wide, the whole length of this row, and when in full bloom, it was very beautiful in appearance. Although there were more than 40 colonies of bees which had access to it, yet one colony succeeded in storing enough honey from this little patch of plants, so that the odor of the plant was plainly discernible in some of the honey in the sections, both to the smell, and to the taste. This seems to indicate that cleome, when well grown, will yield considerable quantities of honey, but not of a desirable quality for table use.

I have been watching with considerable interest for Prof. A. J. Cook's account of his experiment with cleome, which I understood he proposed to make last season; but if anything has been published concerning the result, it has escaped my notice, or else I have forgotten about it. I wish that the Professor would give us his opinion about cleome as a honey-plant.

CATNIP.—This is a good honey-bearing plant, but it also has a flavor peculiar to that herb, which is imparted to the honey that it produces, but, fortunately, it is not very objectionable, and I estimate it as one of the best of honey-plants.

MELILOT.—This plant is too widely and favorably known to need anything further said in its praise. Its delightful fragrance is a guarantee for the excellence of the honey which it produces, and the eagerness with which the bee visits it, is an indication of the quantity, as well as the quality of the nectar which they obtain from it; although there are times when, for some cause, they seem to pass it by almost unnoticed—but this is also the case with almost all other honey-bearing plants, shrubs and trees.

SIMPSON HONEY-PLANT.—It is perhaps one of the most valuable of any on the list of plants to be grown for "honey alone" in this locality. It is a rank, thrifty-growing perennial; grows readily from the seed, and, when once started, will crowd everything else out so far as it is allowed to spread. The variety which I have (I think that it is called "early or dwarf") grows about 8 feet high, and branches out like a small tree. It commences to bloom in July, and continues in bloom until severe frost stops its growth—usually in September or October, in this locality.

When this plant is in bloom, and the weather is such as to admit of it, the bees literally swarm over it from the early dawning of the morning until the shades of evening fall. Hive-bees, bumble-bees, yellow-jackets, hornets, and other species of honey-loving insects hover around it and keep up a roaring equal to a large swarm on the wing, which can be heard several rods distant.

I have never been able to form any definite opinion as to the flavor of the honey from this plant, but if the eagerness manifested by all kinds of bees and other insects to get some of it, is any criterion to judge by, then the quality must be excellent, and the quantity considerable. I have had a little patch of this (perhaps equal to about one square rod) growing for the the last 5 or 6 years, and have many times noticed that all wild bees—such as yellow-jackets, hornets, etc.—have a great preference for this plant; apparently, they will not notice any other kind of flowers in its vicinity, therefore the hive-bees stand a poor chance to get much from so small a stand of plants.

I have sometimes watched the bees working on the Simpson honey-plant, to see how often each blossom would be visited; and I calculated that every open blossom was examined by one or more bees as often as once every minute, on an average, throughout the whole of each and every fine day. Of course they could not get much each time when visited so often, but still they would get enough to keep them hanging around, rather than to go somewhere else to look for honey.

Another important feature about it is, that whatever dearth of nectar there may be from other sources, I have never known the bees to desert the Simpson honey-plant, when it was in bloom, and the weather suitable for bees to work.

Now, with the little knowledge I have of this matter, and the impressions received by observations made from the foregoing trifling and comparatively insignificant experiments, I am ready to believe that it will "pay to occupy farm land for honey alone"—provided that care is taken to select plants well suited to the soil and location, and that we do not have to pasture too many of other people's bees. My first choice of plants for such purpose in this place, would be the Simpson honey-plant; second choice, melilot—but the latter does not seem to "catch" well when sown broadcast on soil here. I have tried twice to seed half an acre, by sowing it with grain crops, the same as other clovers, but for some cause it mostly failed to grow.

GOLDEN-ROD.—That "Many men have many minds," is, I think, verified by the many different opinions which have lately been expressed through the columns of the AMERICAN BEE JOURNAL concerning golden-rod as a honey-plant; and perhaps to some extent they may all be correct, under certain conditions, so far as the plant itself is concerned; but I think that some of them are mistaken in regard to the character of the honey which it produces, if not in the quantity.

In this part of the country, golden-rod is a *good* honey-plant, when all the conditions are right, but it needs an abundance of rain to keep the ground moist when it is in bloom, to enable it to secrete nectar freely. For example, last August, when golden-rod first began to bloom, the weather was very dry, and the bees paid no attention to it until about Aug. 20, when we had a heavy fall of rain which soaked the ground, and for 3 or 4 days after the rain, the bees were all excited over the golden-rod—7 or 8 bees would sometimes be working on the same flower, all at once; but after a week or so of dry weather, they seemed not to notice it any more.

Golden-rod honey, when free from admixture with any other kind of honey, is of a peculiarly bright-straw color, rather thin in texture, and has a flavor, when first gathered, decidedly resembling a weak decoction of the plant, and it is as little inclined to granulate as any other honey with which I am acquainted. I have had it remain liquid a year or more, but it is not often that we can get it free from mixture with other honey, because boneset, wild celandine, wild asters, etc., all bloom about the same time with golden-rod. Honey from wild asters will granulate in a very short time, whether in the comb or out of it.

Aster honey, when free from admixture, is very white—I think that it is as white as linden honey, and, when first gathered, it has a sort of spicy flavor, which is very pleasant to the taste; but when it granulates, it loses that spiciness. I send to the Editor a sample of it, and would like his opinion in regard to its quality, and prob-

able market value. The sample which I send probably is not entirely free from admixture with honey from some other autumn flowers, yet it has enough of the aster honey to make it candy quickly.

Seymour, Wis.

[The two one-pound sections of honey came to hand in due time. The capping was peculiarly white, and made a very attractive appearance, but the honey was granulated solid, making it of no market value as comb honey.

The flavor is quite pleasant to the taste, but honey which granulates quickly should always be extracted as soon as possible, to make it available for manufacturing purposes; for such use the flavor is not taken into account, and if any of its "spiciness" be lost in granulating, it will not affect its market value.

This honey is evidently a mixture from fall flowers, including the asters.

Of all the honey gathered in the fall, that from sweet clover (*Melilotus alba*) is the most pleasant to the taste, and it yields plentifully until after the frosts come.—ED.]

OHIO.

Report of the State Bee-Keepers' Convention.

Written for the American Bee Journal

BY MISS DEMA BENNETT.

The afternoon session of the first day was called to order by Pres. H. R. Boardman, and opened by an enjoyable song by Drs. Miller and Mason.

REVERSING THE COMBS.

Mr. Chalon Fowls, of Oberlin, then read an essay on "Reversing." He had 2 illustrations showing the appearance of the brood in the comb, before and after reversing.

Mr. E. R. Root exhibited a sample of casting for the ends of the frames, to be used in reversing the frames. He said that he had but little experience in reversing, but would like to have the matter discussed. Reversing will cause the bees to build the combs more firmly in the frame, and do not need wiring—some do not wire the frames.

F. A. Eaton—What is the use of reversing?

Mr. Fowls—It will, if rightly done, enable the operator to secure the whole crop of white honey in the sections, and the bees will also more readily enter the sections.

S. F. Newman—If reversing helps to get honey, do it; if not, then do not practice it. It costs time and money.

He could not see that reversing would help any, and if the only object is to get the bees into the sections, it would not pay, as he never had any trouble to get them into supers. If reversing would get the bees ready for the harvest, it might pay. The main thing is to get the colonies strong. During fruit-bloom he puts 2 or 3 brood-combs in each hive, from which he extracts the honey just as white clover comes into bloom. At this time, he puts on the sections, and never has any trouble to get the bees to go into the sections in the old colonies, or to get honey, if there is any in the blossoms to gather. If, at this time, the bees swarm, he hives the new swarm on 5 or 6 frames, using only empty frames with a strip of foundation—just enough to make the bees build straight combs.

Daniel White, would not trouble to reverse the combs.

Geo. Spitler asked Mr. Fowls if he did not have too many bees by reversing?

Mr. Fowls—I do not think that it prevents swarming, but I do think that it discourages swarming.

N. T. Phelps, has reversed combs some. His experience is that he gets no more brood, but gets it concentrated, and he secures just as much honey in the brood-nest, besides getting better combs, than with the non-reversing frames.

Few of those present had practiced reversing.

EXTRACTING AND EXTRACTORS.

The next essay was by Dr. A. B. Mason—"Extracting; which are most expeditious, reversing or non-reversing machines?" He read extracts from reports of those who had used the reversible extractor, and who spoke in praise of its merits.

It was claimed that the reversible extractor was easier on the combs, on account of its larger circumference. A. I. Root called it a "man-killer."

Dr. Miller said that the reversible machine must be large. I think that the small one beats the large one "all hollow."

O. J. Post has one, but the poor honey seasons of the last 2 or 3 years have not given him the opportunity to test it as he would like.

A question was raised as to which was the hardest to operate, but it was not decided.

Mr. Phelps—You have to turn harder to get it started, but after it is started, it does not take any more power to turn it.

Mr. J. F. Moore said that he thought that most of the large honey-producers in California used the reversible extractor.

BASSWOOD—THE BEE-BUSINESS.

A recess of 10 minutes was then taken, which was followed by Pres. H. R. Boardman's address, on "A brief glance at past and future bee-keeping." Pres. Boardman referred to the great destruction of basswood, but Mr. A. I. Root does not think that this is all the reason why the honey crop seems to be getting smaller and smaller each year. There are, perhaps, many reasons for the failure. He believes that it would pay to plant basswood trees for honey. He told of a man who cut down his basswood, and sold it to him for sections a few years ago, and from the sprouts around the stumps, timber is again large enough to make into sections.

Dr. Miller said that there is always something to encourage the bee-keeper—it is a hopeful business. In 1882 he had 16,849 pounds of honey; the years following, he had less and less, until in 1887 he had to feed his bees 2,800 pounds of sugar to keep them alive. In 1889, he had 12,000 pounds of honey, and now perhaps it will be getting better. There is no basswood in his locality.

Mr. C. A. Camp said that he was present at a convention in Cleveland 19 years ago, when Capt. Hetherington reported that he had sold honey so that it yielded an enormous revenue, and that had induced him, as well as many others, to go into the bee-business, and most of them failed. He advised young men to be careful about going into the business, and does not think it is best for bee-keepers to speak only of their success, at conventions, but they should also recount their failures, so that we should have both sides of the story.

S. F. Newman said that the bee-business was a hopeful one. There was not a year in the last 15 but that the bees had paid their way. It is "hopeful," because he hopes for a good year the coming summer.

Several communications were read by the Secretary, announcing the result of "Prang's National Flower" campaign, which gave 70 per cent. of all votes cast, for Golden-Rod; words of greeting from Prof. A. J. Cook, C. P. Dadant, and R. F. Holtermann, the two latter expressing the hope that we would affiliate with the International; also one from Anna L. Cowan, the daughter of Rev. L. L. Langstroth, saying that her father was in very feeble health, but that she could not relinquish the hope that there might yet be days of health and enjoyment in store for him. She said:

"He desires me to say that were he able, it would give him great pleasure to meet with the Ohio convention, that he might look upon the faces of his bee-keeping friends, and give them a kindly clasp of the hand. He desires to be kindly remembered to them all, and wishes you a pleasant and helpful meeting, and to all a prosperous and happy year."

On motion, it was unanimously carried that the Secretary be instructed to convey to Father Langstroth, our sympathy in his affliction, and hope that he will regain his health so as to be with us at our next meeting.

THE QUESTION-BOX.

Is it best to hive swarms on frames filled with comb foundation, or on empty frames?

The majority were in favor of using comb foundation.

Is it advisable to put in full size, or only partly fill sections with foundation?

A large majority—nearly 3 to 1—would fill the section with foundation.

Is it advisable to encourage those about us to embark in bee-keeping?

Dr. Miller said that it might be, if the ground was not already fully occupied; if it was, he would advise all to stay off the field. The President said that there was room for all—let them try it. A. I. Root advised no one to go into bee-keeping, but if any person wanted to go into the business, he would do all he could for them by giving advice, etc.; but it is essential that they "go slow"—commence with a few swarms, so as to learn the business as they go.

Toledo was chosen as the place for holding the next meeting. Officers for the ensuing year were chosen as follows:

President, Dr. A. B. Mason, of Auburndale; Vice-President, S. F. Newman, of Norwalk; and Secretary and Treasurer, Miss Dema Bennett, of Bedford.

The convention then adjourned until 7 p m.

EVENING SESSION.

The convention was called to order at 7 o'clock, with Pres. Boardman in the chair. Dr. Miller sang a song entitled, "Higher than I," after which the question-box was opened.

FASTENING BEES IN HIVES.

Is it advisable to fasten bees into the hive in cellar-wintering?

A. I. Root said that at one time he had fastened bees into the hive, but they had plenty of air. They did well. He would not shut them in, if tight bottom-boards were used.

Dr. Miller would not shut the bees in, because bees would die in the hive, and so become filthy, which would not be if the hive is left open, as the dead bees would be dragged out. He would rather have dead bees on the cellar-floor than in the hive, because they could then be swept up. He thought that no bees but those which were about to die would leave the hive. They would also be uneasy if shut in the hive.

A. I. Root said that at one time he picked up a lot of bees which had left the hive and were chilled, and after warming them up, he used them to strengthen a weak colony, which did well.

The President said that this was an important question. Mr. Root's report might induce a young bee-keeper to do the wrong thing. Bees will not tolerate anything in their hives which is not clean. If hives are shut up tight, they cannot remove the dead bees. By shutting them in, we break one of their laws. He knew of a man that bought 40 or 50 colonies, put them into a cellar in closed hives, and all died. If they would remain quiet, they might come out all right; but if they were to become uneasy when the weather was a little too warm, the combs might be melted down. Shutting the bees in the hive produces an abnormal condition. With plenty of room below, the conditions would be bettered.

N. T. Phelps related how a man had fastened his bees at the top and bottom of the hive with wire-screens, and they all died in April.

Dr. Tinker thought that with wire-cloth they might be successfully wintered.

Quite a merriment was caused by the question, "Who is the best bee-keeper in Ohio?"

"What is the best remedy for bee-stings?" provoked quite a discussion, and many remedies were given. Dr. Mason said that any essential oils, such as oil of cinnamon, cloves, peppermint, etc., was good. Have them on hand, and if visitors are stung, apply at once. In bad cases, call a physician. Some recommended cold water as the best remedy, and other remedies were also suggested, such as Pond's extract, etc.

H. F. Moore read a very interesting essay on marketing honey.

Dr. Mason read a letter relating to a sample of what was bought in Cleveland as honey. Proper resolutions were passed, and committees appointed to investigate the matter.

H. F. Moore exhibited samples of honey in packages, both comb and extracted. He sold to one druggist 68 quart-cans; to another 60 pounds. They prepare it in small packages.

After a recess, "Spring-time Joys" was sung by Dr. Miller.

PRODUCTION OF COMB HONEY.

N. T. Phelps, of Kingsville, made a few remarks of much interest on the production and marketing of comb honey. He winters his bees on the summer stands and practices several methods. The important thing is to know your locality—when honey-producing flowers bloom—and have the bees ready to take the honey. He always keeps a record of the time when the different honey-plants bloom. He takes brood from the weak colonies to strengthen those that are stronger, as weak colonies would not store any honey. He uses mostly wide frames in the production of comb honey. His hardest work is to control swarming, which he tries to do until basswood blooms, when, if they swarm, he puts them back and takes out queen-cells, when they are not likely to swarm again.

He uses small wide-frames, holding 3 sections apiece, using wood separators 3½ inches wide, made of basswood. He thinks the comb honey is whiter for using wood, and claims that a person, even if inexperienced, could pick out the honey which had been produced with tin or wood separators. Wood is far cheaper than tin. He cannot get honey in good shape to crate for market without separators; has used a few T supers; controls swarming by cutting out queen-cells and drone-brood, and by expanding the brood-nest; contracts the brood-nests after the bees have swarmed, and uses wide frames because he can the better grade the surplus according to size of colony. About one-third will swarm.

SHIPPING COMB HONEY.

Dr. Miller explained how he packed his honey into a car, and it carried in fine condition to Pittsburg.

The President told how he had bought honey, which was shipped to him over 500 miles, and was badly broken. He thinks that if there had been a separator between the sections as when on the hive, it would have carried all right.

Dr. Besse said that during the Centennial at New Orleans, he shipped to that city 2,000 pounds; put sections lengthwise of the cars, and it went through in fine condition. He took at the same time, the same amount of extracted honey in bottles, and did not break a bottle. Some of the frames in his hives of bees were broken.

Dr. Miller would not ship a section if the top and bottom were not well fastened into the sections. To have them well fastened, put a strip of foundation at the top and bottom.

H. F. Moore would ship in a 2-tier crate holding 24 sections. Mr. Phelps shipped 120 pounds in sections to a point 180 miles south-west of Denver, Colo., and not a pound was broken.

The convention then adjourned to meet at 9 o'clock a.m., the next day.

SECOND DAY—MORNING.

The first session of the second day opened with a song by Dr. Miller, followed by an essay by S. F. Newman, on "Bee-Forage," which was fine, and led to the following discussion:

SWEET CLOVER AND OTHER PLANTS.

Mr. Newman said that he did not believe the tulip (poplar) tree was appreciated as it should be. He had seen it so thick with honey that when he took blossoms of it to his children, they were delighted to extract the honey from them.

Dr. Miller said sweet clover will grow in out-of-the-way places; had sown as much as 20 acres, but it would not grow under cultivation, for him.

Mr. Newman has no faith in sweet clover for honey.

President Boardman asked if any person present had ever known of a large crop of honey being gathered from sweet clover? Mr. Newman had not; J. F. Moore had known of a decided sweet-clover flavor in the honey.

The question was asked, "What is the quality of sweet clover honey?" A. I. Root said that experiments showed that in order to know the quality of any kind of honey, a large area of plants of a kind is required. Bees consume so much honey in brood-rearing that it is hard to get any one kind of honey. At Ogden, Utah, he had seen large areas of sweet clover upon which the bees did splendidly. The honey was as nice and of as fine a flavor as any he ever saw. He had an idea that 100 colonies would want 100 acres of sweet clover, to do much good.

Mr. White had tasted sweet clover honey that was very fine. H. F. Moore said that some claimed it a bad weed. F. A. Eaton said there were acres of it on one side of Toledo. He thought that sweet clover honey was disagreeable to the taste. Dr. Mason thought that perhaps Mr. Eaton did not know that the honey was pure sweet clover; it was hard to tell. He had at one time about 70 pounds which was nice, and he thought it was sweet clover honey.

Dr. Miller thought as locality had so much to do with it, perhaps sweet clover blossoms might secrete honey in the West, and not in the East. He said that the bloom of sweet clover extends beyond that of white clover—blooms forever.

A general discussion followed as to the feasibility of sowing or planting for honey alone. The opinion seemed to be that it would not pay. Alsike clover was generally called a good honey-plant, and well liked for hay.

Dr. Miller thought that the production of honey might be increased by inducing nurserymen to plant and sell basswood trees to those who wish to plant shade-trees. He had at different times planted for others, and got others to plant basswood, he furnishing the trees himself. He reported how some one had cut down a basswood and planted a *linden*, thinking it another kind of tree. He also thought it might pay to plant sweet and Alsike clover. He thought that cattle could be induced to eat sweet clover, and if it could be made a forage plant it would pay, as it yields honey.

President Boardman said that cattle will, under some circumstances, eat sweet clover. Most of those present had not much faith in sweet clover as a honey or forage plant, though some knew it to produce lots of honey. Some claimed it as a weed. The President said that it was not, as it would not spread.

Mr. A. I. Root thinks that alfalfa may yet prove valuable as a honey-plant in Ohio, as it had in Colorado and other places in the West.

WATER FOR THE BEES.

Dr. Miller said that bees need lots of water. He uses crocks filled with water, and puts in wooden floats. The bees take the water from the wood, and none are drowned.

Mr. Newman uses rotten wood on the water. Dr. Besse uses a trough 10 feet long and 4 inches deep, which holds 5 pails of water. Bees had emptied the trough twice in one day. He puts a handful of salt in the trough once a week. He had a colony which gained 40 pounds in 6 days from fruit blossoms; it was strongly flavored with cherry.

The committee to prepare a Constitution and By-Lays for the association, consisting of E. R. Root, H. F. Moore, and Miss Dema Bennett, were called upon for a report, when Dr. A. B. Mason moved that we adopt the Constitution and By-Laws as prepared by the committee, and trust to their judgment, without taking time to have it read and debated upon. The motion was carried unanimously.

Dr. A. B. Mason (committee on Resolutions) reported as follows:

RESOLVED, That in the publication of the Honey Almanac, by Thomas G. Newman, of Chicago, we have something "new under the sun," and of real merit, and would recommend a generous distribution of them, as a means of increasing the demand for honey, in the home market.

RESOLVED, That the thanks of this Association are due, and are hereby tendered, to the railroads of the State, for their kindly giving us reduced rates of fare; to Hotel, Cleveland papers, and to the City Council; to Dr. C. C. Miller, of Marengo, Ills., who has favored us with his presence, and with his inimitable rendering of bee-keepers' songs, which have enlivened our sessions, and for his hearty interest and work during our meeting, we cordially extend our most sincere thanks.

The report was unanimously adopted; also, a motion that this Association affiliate with the "International Bee-Association."

J. B. Hains then read an essay on "Out Apiaries."

Mr. S. F. Newman has 2 out-apiaries, one of which he runs for extracted honey, the other for comb honey; he allows strong colonies to swarm. As soon as white clover blooms, he puts the supers on; does not extract until the season is over; puts an empty story over the colony, raising the filled super on the top, and gets better honey in this way. The comb honey apiary he visits often; has 70 colonies in the extracting apiary, and 50 where he runs for comb honey. Generally he gets some buckwheat bloom, but extracts before this.

F. A. Eaton read an essay on "Cellar-Wintering of Bees."

President Boardman, who is one of the most extensive bee-keepers in the State, leaves the bottom-boards on the summer stands, and winters the bees without them; he tries to put them in when the temperature is falling; the cellar should be kept dark, with a temperature about 45°; and the bees should not be removed from the cellar to the open air when the temperature outside is high.

F. A. Eaton places blocks under each corner of the hive, for ventilation.

Dr. Miller considers loose bottom-boards and blocks superfluous. The temperature should not be over 50°. He had, at one time, when his cellar was full of hives, raised the temperature to 72°, and the bees showed no visible uneasiness. He then opened the windows, and the next morning the bees were more quiet than they had been for some time.

Dr. Mason thinks that 45° is the right temperature, and said that where he can keep vegetables in a cellar, there he can keep bees.

S. F. Newman put his bees into the cellar last September, had looked at them in November, and did not expect to see them again until spring. He would not give any one a dollar to insure them as being all right.

N. T. Phelps thinks that there are large exaggerations in regard to consumption of stores in wintering. His bees do not consume as much as other people's bees do, as they tell it. He thinks that a cellar or cave for wintering bees is much the cheapest.

E. R. Root, who was to read an essay on "Out-Door Wintering of Bees," asked to be excused, owing to the lateness of the hour.

A. Webster said that any one passing his place would see three hives on top of his house; they have been there for three years, and no colonies in the apiary have wintered better.

A vote was taken, showing that about two-thirds of those present wintered their bees out-doors.

In answer to a question, Dr. Mason said that ammonia in water will remove propolis from the hands.

The Convention then adjourned till 1:30 p.m.

THE AFTERNOON SESSION

opened with a song by Dr. Miller, who was unanimously elected an honorary member of the Association; also Geo. Spitler, of Mosiertown, Pa., who has kindly assisted in preparing this report of the Convention.

E. R. Root then read an essay on "Thick Top-Bars and Honey-Boards."

A. I. Root remarked that Father Langstroth used thick top-bars 25 years ago—the modern device was only an improvement, because the combs are at fixed distances. He does not, as yet, know which is best.

President Boardman said that since using the thick top-bars, he had not been troubled with burr-combs.

In answer to the question, "How many use honey-boards?" it was shown that only 9 of those present use them.

Dr. Miller said that he had learned to do away with honey-boards.

President Boardman thinks that wide frames are the most perfect, because the sections are better protected from propolis.

Dr. Miller has less cleaning with the T super, than with any other method that he has tried.

C. A. Graves uses the T super, and a top-bar scant ⅞ of an inch.

Dr. G. L. Tinker then read an essay, entitled, "Perforated Zinc for Queen-Rearing." He was kept busy answering questions for quite awhile.

C. A. Graves, chairman of the committee on Exhibits, reported that all of the articles on exhibition were favorably mentioned in their report.

Mr. S. F. Newman, chairman of the committee on statistics, reported for the convention as follows: Number of colonies in the fall of 1888, 3,524; number in the spring of 1889, 3,265; and number in the fall of 1889, 4,067. Number of pounds of comb honey in 1889, 46,099; number of pounds of extracted honey in 1889, 27,145; number of pounds of beeswax in 1889, 756. The average yield of honey was about 22 pounds per colony, spring count.

Dr. G. L. Tinker, of New Philadelphia, Daniel White, of New London, and O. S. Terrell, of North Ridgeville, were appointed delegates to the International Convention, at Keokuk, Iowa.

An essay by Miss Dema Bennett, (Secretary), on "Queen Rearing and Shipping," was last on the programme.

The Convention then adjourned to meet at Toledo, Ohio, at the call of the Executive Committee.

LESSONS OF THE CONVENTION.

Those who have attended previous Ohio bee-conventions, seem to be well pleased with both the attendance and interest taken at this meeting; but there is one thing that I noticed—too many of them took a silent interest. Several bee-keepers, who have from 75 up to 200 colonies, and must have had experience in some of the subjects brought up, said never a word. I, for one, would be glad to see this order of things changed, but how can it be brought about?

How would it do to divide the convention into classes for each topic, thus? One class to be composed of those who have had experience, and the other those who were interested, but have not had the experience, who should be free to ask questions of the other side—1 question only—until the last class had been "clear around," when, if the time devoted to the topic was not all taken up, they could ask questions around again, or the first class could each, in turn, speak on the question a stipulated time, until all had spoken. It is surprising how much can be crowded into a short space of time in an "experience meeting" where all are interested.

In some such way we would become better acquainted with each other; and, I believe in "The greatest good, to the greatest number." This would relieve the President of embarrassment, which proceeds from not knowing the names of members, and naturally enough calls on those he does know, rather than to risk putting the right man on the wrong subject. (I hope that Pres. Mason will appreciate my consideration for his bashfulness).

To say that we were greatly indebted to Dr. Miller for inspiring the convention with his kindly presence and cheering voice, is needless to those who know that the Doctor is a "host in himself," and we sincerely hope that now he is one of us, we shall meet him again in the Buckeye State.

I wish to put this Association on record as having disposed of all the topics on the programme, by the reading of an essay, followed by discussion, excepting a talk by Mr. A. I. Root, and the absence of 1 person; but the topic was taken up in its regular time, and the convention closed promptly on time on the last day.

DEMA BENNETT, *Sec.*

[The many interesting essays read at the above Convention will appear in the BEE JOURNAL, as we may be able to find place for them.—ED.]

BEES IN SPRING.

The Early Spring Management of Bees.

Written for the Michigan Farmer

BY GEO. E. HILTON.

The time of year is upon us again, when the bees should be watched closely, to see that they do not get out of stores. Look over the colonies closely, and be sure that they have an abundance. You may find some colonies that have more than they need, while the next may be on the point of starvation; these may be equalized, but be sure that you do not rob the plenteous one, for one good colony is worth more than two weak ones, and plenty of stores at this time of year, means plenty of bees in time to gather the first flow of nectar.

The instinct of the bee must approach the ability to reason more closely than is common in the insect kingdom, for as soon as their stores begin to grow short, and no honey in the fields, the production of eggs lessens in proportion. So you see it is very poor economy to stint the bees, with the thought that if you can keep them along until honey begins to come in, they will be all right. The bees may get along very well, but their keeper (if he deserves the name), will come out at the "small end of the horn." I have often said that if we could have our colonies strong when the hard maple blooms, as they are when the basswood blooms, we should get as much honey from the former as the latter.

I once secured 200 pounds from the raspberry and blackberry bloom before the white clover bloomed; that season my colonies were very strong early, and while I did not get any surplus from the maple bloom, the bees gathered large quantities, and fitted the brood-nest in the best possible shape for the berry bloom. I could have extracted considerable from the brood-nest, but it would have meant just that much less berry-bloom honey in the sections.

I speak of all this to show how necessary it is to have plenty of stores in the brood-nest during the next 30 days.

A noted bee-keeper of this State once told me that he would just as soon have 5 pounds of honey in the hive on May 1, as more. But I will venture the assertion that I can take a colony with the same numerical strength, having 15 pounds of honey, as one having 5 pounds, the first of May, and take 20 pounds more surplus from it during the season, and leave each the same number of pounds to winter on.

Of course, my advice is to make all this preparation the previous season, but if, as some colonies do, they use up so much during the winter that they are short at this time of year, by all means feed them. Feed honey, if you have it; if not, make a syrup of sugar, just as you do for table use. I once fed quite a quantity of maple syrup, and it answered very nicely for breeding purposes.

In feeding, if you have hives with tight bottoms, just raise the front end of the hive about 2 inches, and pour the food in it at the rear end of the frames while quite warm. I prefer to do this just toward evening; it will all be cleaned up before morning, and there is no danger of robbing. Don't open the hives or handle the frames more than necessary, at this time of year, and keep the bees tucked up as warm as possible.

SECOND DAY—MORNING.

The first session of the second day opened with a song by Dr. Miller, followed by an essay by S. F. Newman, on "Bee-Forage," which was fine, and led to the following discussion:

SWEET CLOVER AND OTHER PLANTS.

Mr. Newman said that he did not believe the tulip (poplar) tree was appreciated as it should be. He had seen it so thick with honey that when he took blossoms of it to his children, they were delighted to extract the honey from them.

Dr. Miller said sweet clover will grow in out-of-the-way places; had sown as much as 20 acres, but it would not grow under cultivation, for him.

Mr. Newman has no faith in sweet clover for honey.

President Boardman asked if any person present had ever known of a large crop of honey being gathered from sweet clover? Mr. Newman had not; J. F. Moore had known of a decided sweet-clover flavor in the honey.

The question was asked, "What is the quality of sweet clover honey?" A. I. Root said that experiments showed that in order to know the quality of any kind of honey, a large area of plants of a kind is required. Bees consume so much honey in brood-rearing that it is hard to get any one kind of honey. At Ogden, Utah, he had seen large areas of sweet clover upon which the bees did splendidly. The honey was as nice and of as fine a flavor as any he ever saw. He had an idea that 100 colonies would want 100 acres of sweet clover, to do much good.

Mr. White had tasted sweet clover honey that was very fine. H. F. Moore said that some claimed it a bad weed. F. A. Eaton said there were acres of it on one side of Toledo. He thought that sweet clover honey was disagreeable to the taste. Dr. Mason thought that perhaps Mr. Eaton did not know that the honey was pure sweet clover; it was hard to tell. He had at one time about 70 pounds which was nice, and he thought it was sweet clover honey.

Dr. Miller thought as locality had so much to do with it, perhaps sweet clover blossoms might secrete honey in the West, and not in the East. He said that the bloom of sweet clover extends beyond that of white clover—blooms forever.

A general discussion followed as to the feasibility of sowing or planting for honey alone. The opinion seemed to be that it would not pay. Alsike clover was generally called a good honey-plant, and well liked for hay.

Dr. Miller thought that the production of honey might be increased by inducing nurserymen to plant and sell basswood trees to those who wish to plant shade-trees. He had at different times planted for others, and got others to plant basswood, he furnishing the trees himself. He reported how some one had cut down a basswood and planted a *linden*, thinking it another kind of tree. He also thought it might pay to plant sweet and Alsike clover. He thought that cattle could be induced to eat sweet clover, and if it could be made a forage plant it would pay, as it yields honey.

President Boardman said that cattle will, under some circumstances, eat sweet clover. Most of those present had not much faith in sweet clover as a honey or forage plant, though some knew it to produce lots of honey. Some claimed it as a weed. The President said that it was not, as it would not spread.

Mr. A. I. Root thinks that alfalfa may yet prove valuable as a honey-plant in Ohio, as it had in Colorado and other places in the West.

WATER FOR THE BEES.

Dr. Miller said that bees need lots of water. He uses crocks filled with water, and puts in wooden floats. The bees take the water from the wood, and none are drowned.

Mr. Newman uses rotten wood on the water. Dr. Besse uses a trough 10 feet long and 4 inches deep, which holds 5 pails of water. Bees had emptied the trough twice in one day. He puts a handful of salt in the trough once a week. He had a colony which gained 40 pounds in 6 days from fruit blossoms; it was strongly flavored with cherry.

The committee to prepare a Constitution and By-Lays for the association, consisting of E. R. Root, H. F. Moore, and Miss Dema Bennett, were called upon for a report, when Dr. A. B. Mason moved that we adopt the Constitution and By-Laws as prepared by the committee, and trust to their judgment, without taking time to have it read and debated upon. The motion was carried unanimously.

Dr. A. B. Mason (committee on Resolutions) reported as follows:

RESOLVED, That in the publication of the Honey Almanac, by Thomas G. Newman, of Chicago, we have something "new under the sun," and of real merit, and would recommend a generous distribution of them, as a means of increasing the demand for honey, in the home market.

RESOLVED, That the thanks of this Association are due, and are hereby tendered, to the railroads of the State, for their kindly giving us reduced rates of fare; to Hotel, Cleveland papers, and to the City Council; to Dr. C. C. Miller, of Marengo, Ills., who has favored us with his presence, and with his inimitable rendering of bee-keepers' songs, which have enlivened our sessions, and for his hearty interest and work during our meeting, we cordially extend our most sincere thanks.

The report was unanimously adopted; also, a motion that this Association affiliate with the "International Bee-Association."

J. B. Hains then read an essay on "Out Apiaries."

Mr. S. F. Newman has 2 out-apiaries, one of which he runs for extracted honey, the other for comb honey; he allows strong colonies to swarm. As soon as white clover blooms, he puts the supers on; does not extract until the season is over; puts an empty story over the colony, raising the filled super on the top, and gets better honey in this way. The comb honey apiary he visits often; has 70 colonies in the extracting apiary, and 50 where he runs for comb honey. Generally he gets some buckwheat bloom, but extracts before this.

F. A. Eaton read an essay on "Cellar-Wintering of Bees."

President Boardman, who is one of the most extensive bee-keepers in the State, leaves the bottom-boards on the summer stands, and winters the bees without them; he tries to put them in when the temperature is falling; the cellar should be kept dark, with a temperature about 45°; and the bees should not be removed from the cellar to the open air when the temperature outside is high.

F. A. Eaton places blocks under each corner of the hive, for ventilation.

Dr. Miller considers loose bottom-boards and blocks superfluous. The temperature should not be over 50°. He had, at one time, when his cellar was full of hives, raised the temperature to 72°, and the bees showed no visible uneasiness. He then opened the windows, and the next morning the bees were more quiet than they had been for some time.

Dr. Mason thinks that 45° is the right temperature, and said that where he can keep vegetables in a cellar, there he can keep bees.

S. F. Newman put his bees into the cellar last September, had looked at them in November, and did not expect to see them again until spring. He would not give any one a dollar to insure them as being all right.

N. T. Phelps thinks that there are large exaggerations in regard to consumption of stores in wintering. His bees do not consume as much as other people's bees do, as they tell it. He thinks that a cellar or cave for wintering bees is much the cheapest.

E. R. Root, who was to read an essay on "Out-Door Wintering of Bees," asked to be excused, owing to the lateness of the hour.

A. Webster said that any one passing his place would see three hives on top of his house; they have been there for three years, and no colonies in the apiary have wintered better.

A vote was taken, showing that about two-thirds of those present wintered their bees out-doors.

In answer to a question, Dr. Mason said that ammonia in water will remove propolis from the hands.

The Convention then adjourned till 1:30 p.m.

THE AFTERNOON SESSION

opened with a song by Dr. Miller, who was unanimously elected an honorary member of the Association; also Geo. Spitler, of Mosiertown, Pa., who has kindly assisted in preparing this report of the Convention.

E. R. Root then read an essay on "Thick Top-Bars and Honey-Boards."

A. I. Root remarked that Father Langstroth used thick top-bars 25 years ago—the modern device was only an improvement, because the combs are at fixed distances. He does not, as yet, know which is best.

President Boardman said that since using the thick top-bars, he had not been troubled with burr-combs.

In answer to the question, "How many use honey-boards?" it was shown that only 9 of those present use them.

Dr. Miller said that he had learned to do away with honey-boards.

President Boardman thinks that wide frames are the most perfect, because the sections are better protected from propolis.

Dr. Miller has less cleaning with the T super, than with any other method that he has tried.

C. A. Graves uses the T super, and a top-bar scant $\frac{7}{8}$ of an inch.

Dr. G. L. Tinker then read an essay, entitled, "Perforated Zinc for Queen-Rearing." He was kept busy answering questions for quite awhile.

C. A. Graves, chairman of the committee on Exhibits, reported that all of the articles on exhibition were favorably mentioned in their report.

Mr. S. F. Newman, chairman of the committee on statistics, reported for the convention as follows: Number of colonies in the fall of 1888, 3,524; number in the spring of 1889, 3,265; and number in the fall of 1889, 4,067. Number of pounds of comb honey in 1889, 46,099; number of pounds of extracted honey in 1889, 27,145; number of pounds of beeswax in 1889, 756. The average yield of honey was about 22 pounds per colony, spring count.

Dr. G. L. Tinker, of New Philadelphia, Daniel White, of New London, and O. S. Terrell, of North Ridgeville, were appointed delegates to the International Convention, at Keokuk, Iowa.

An essay by Miss Dema Bennett, (Secretary), on "Queen Rearing and Shipping," was last on the programme.

The Convention then adjourned to meet at Toledo, Ohio, at the call of the Executive Committee.

LESSONS OF THE CONVENTION.

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Of course, my advice is to make all this preparation the previous season, but if, as some colonies do, they use up so much during the winter that they are short at this time of year, by all means feed them. Feed honey, if you have it; if not, make a syrup of sugar, just as you do for table use. I once fed quite a quantity of maple syrup, and it answered very nicely for breeding purposes.

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CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.

May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.

May 10.—York and Cumberland, at Buxton Ctr., Me.
C. W. Costellow, Sec., Waterboro, Me.

May 17.—Haldimand, at Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

May 20.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita N. C.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant.....Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

Not so Cold—Wintered Finely.

Yea, verily, it will not do to combine pleasure with letter-writing, especially if one is pressed for time, as was the case when I prepared the article on "Wintering Bees," which was published on page 264. The type-writer operator, among other mistakes made, caused me to say that the thermometer at one time last winter, registered 60 degrees below zero. Now be it known that it never has been that low in any portion of Nebraska; I should have said 23 degrees below zero. Since writing the article referred to above, I have taken the bees from the cellar, and find that every colony is in fine condition, and breeding rapidly. A. C. TYRREL.

Madison, Nebr., April 19, 1890.

Bees are at Work.

My bees have been at work for some time. Last fall I put 5 colonies into winter quarters, and this spring I have taken only 3 out alive—the other 2 have gone to the "happy hunting-grounds." I intend to build large hives this year, and let only one swarm issue from the hive of each colony. O. R. HAWKINS.

Bellport, N. Y.

Painting Hives—Wintered Well.

As the subject of painted and unpainted hives is being discussed, I would say that I paint all of my hives white, and never use any shade, and have no trouble about combs melting down; but last season I made some hives that I did not paint, and in nearly every one the combs melted down. I had 5 colonies in unpainted hives, and there was not one of them that came through in good condition. I like my hives painted on the inside as well as outside—it pays.

The weather so far has not been very good for bees, but they have been working for the last few days on box-elder, and seem to be in pretty good condition. All the 235 colonies that I put into the cellar wintered well, except 2 that were queenless. I notice that one writer who has less than 50 colonies, wants to know who can beat him. I think that I can do nearly as well with more bees. Three years ago I had 100 colonies, and had no loss; 2 years ago 140, and no loss; and 235 last year, with only 2 lost, and if I would have had time to look them over last fall, I would not have lost those, for I would have doubled them up with some others. They came out far ahead of my expectations for not being looked over at all in the fall. As I had to build a new house very late, I had no time to attend to the bees.

N. STAININGER.

Tipton, Iowa, April 22, 1890.

Bees Wintered Very Well.

My bees have wintered very well. I never saw so much honey in the hives at this time of the year. J. L. WAY.

South Newbury, O., April 19, 1890.

Flattering Prospects—No Losses.

The prospects for a good honey crop in this locality are very flattering. Nothing but unfavorable weather will prevent it. There are no winter losses here; in fact, colonies wintered with the surplus on, did well. R. B. WOODWARD, M. D.

Somerset, O., April 23, 1890.

Bees Wintered in Fine Condition

Bees have generally wintered in fine condition; those out-doors, packed in chaff, shavings, etc., are especially fine. Those wintered in the cellar, I expected to lose, as they were very uneasy. My 38 colonies all wintered, but one is queenless. Bees cannot help but boom, this census year. White clover looks promising. Honey is all used up. GEO. SPITLER.

Mosiertown, Pa., April 22, 1890.

Bees in Weak Condition.

Bees here are in a very weak condition, as the loss was very heavy in bees, in the cellar, although the loss in colonies was only about 5 per cent. The weather has been warm and very dry thus far, and if it does not rain soon, the outlook will not be very encouraging. The soil was in excellent condition for spring work, and farmers have seeding mostly finished.

WM. ENKE.

Rochester, Minn., April 23, 1890.

The Prospects in Florida.

To-day we are about where we were 8 weeks ago—with not as much honey in the hives, but more bees. The orange trees were beginning to bloom; the frost then cut them off, and killed nearly all the bloom and buds, as well as much of the young growth. The second growth is put out again and is full of bloom, and we hope that we will have some orange honey yet, but it will be mixed with the wild grape. Our honey season will be shorter than usual. The palmetto will soon be in bloom also, but much of it was killed by the frost, or so damaged that the bloom will be later, and not so plentiful. The button-ball was killed back a great deal, but the second growth is coming out finely, and will be very abundant. I think that it lost nearly all the summer months.

Our prospects for a fall flow of honey is not very promising, but we are not discouraged in the least, and believe that along the upper St. Johns river is one of the best locations in the State, or in almost any other State. There are only a few days in the year that bees cannot gather their support—there are very few that take any care of their bees with the care that they deserve and require for a profit. Successful bee-keeping can only be done by specialists who have no other occupations that may cause the bees to be neglected a single day. Strict attention and skill in their care with a manipulation of each colony as to its needs, are the only certain road to success. To know every colony requires the closest observation, with no putting off until to-morrow.

JOHN CRAYCRAFT.

St. Francis, Fla., April 19, 1890.

White Clover a Perfect Mat.

Bees in this county have wintered very well—mostly on the summer stands. I think that the loss will not be more than 5 per cent. of all good colonies in the fall; the reason is that almost all had good clover honey in the brood-combs. Bees are doing nicely now on fruit bloom and maple buds. I think they are gathering honey from the apple, and if the weather continues as favorable as it is now, a week more, or until all of the apple-trees are in bloom, there will be some swarms. The weather is fine now, and everything bids fair for a good honey year. The white clover is a perfect mat all over the ground—it has a good foothold here in Kansas.

HIRAM J. WARD.

Farmington, Kans., April 21, 1890.

Gathering Pollen and Honey.

I put 42 colonies of bees into the cellar last fall, and put out 42 this spring, but one swarmed out, and two were light and queenless, which I put with another weak one, leaving me now 39. All are carrying in pollen and honey from willow and poplars. We are having nice spring weather, wheat is about all sowed, and some people are making garden. I have 50 acres of land, 30 of it being heavy timber, with a good many basswood and box-elder trees, and hard and soft maple.

GEO. H. AURINGER.

Bonniwell's Mills, Minn., April 23, 1890.

Getting Ready for the Season.

We are having splendid weather now—11 days without rain. Pollen is coming in plentifully, and some honey. Everything looks like a good season with the bees. We are getting our apiary into shape, and expect to have drones flying from our best imported colony in 2 or 3 weeks. We shall run 300 of our nuclei hives with small section-frames; many of the small combs are filled with brood in all stages, ready to be broken up at any time.

Our method of forming nuclei that will stay where they are put, is very simple: Six of the small hives will just fit on top of a full colony, and we can get a few queens mated there before breaking-up time comes; then all we have to do is to lift them off and start a new lot, by lifting hatching brood up in small combs from the brood-combs below, and placing screen-cloth between; put in 2 combs of honey and a queen-cell, and in a few days they will be ready to come off.

In this way, we can get all the working nuclei we need, without the usual bother of bees going back. They sometimes swarm out as soon as they get their liberty, but the queens are held by nectar, and they return all right. The next day we put in a comb of brood, and the queen is allowed to fly and be mated to our select drones that we shall have in great quantities distributed among the small hives.

E. L. PRATT.

Marlboro, Mass., April 21, 1890.

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 — OLDEST BEE PAPER IN AMERICA

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

☞ Subscribers who do not receive their papers promptly, should notify us at once.

☞ Money in Potatoes, by Mr. Joseph Greiner. Price, 25 cents, postpaid. For sale at this office.

☞ Send us one **NEW** subscriber, with $1.00, and we will present you with a nice Pocket Dictionary.

☞ Red Labels are nice for Pails which hold from 1 to 10 lbs. of honey. Price $1.00 per hundred, with name and address printed. Sample free.

☞ Calvert's No. 1 Phenol, mentioned in Cheshire's Pamphlet on pages 16 and 17, as a cure for foul brood, can be procured at this office at 25 cents per ounce, by express.

☞ The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to advance that date another year.

☞ Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

☞ Any of the Political Dollar Weekly Newspapers will be clubbed with our JOURNAL at $1.85 for the two; or with both our HOME JOURNAL and BEE JOURNAL for $2.50 for all three papers.

☞ As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

☞ Systematic work in the Apiary will pay. Use the Apiary Register. Its cost is trifling. Prices:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

☞ When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand Book, by mail, postpaid. It sells at 50 cents.

☞ We offer the Monthly Philadelphia *Farm Journal*, and either the AMERICAN BEE JOURNAL or ILLUSTRATED HOME JOURNAL for one year, for the small sum of $1.20. Or, we will *give it free* for one year to any one who will send us *one new* subscriber for either of our Journals with $1.00 (the subscription price).

HONEY AND BEESWAX MARKET.

KANSAS CITY, April 25.—Market is cleaned up on comb honey. We quote: White 1-lbs., 14c.; 2-lbs., 13c. Dark 1-lbs., 10@12c.; 2-lbs., 10@11c. Extracted is very dull sale at 5@7c. No Beeswax in the market.
CLEMONS, CLOON & CO.,
Cor. 4th and Walnut Sts.

BOSTON, April 19.—Market is strong and well cleaned up on all fancy 1-lbs., at 16c. A small quantity of 2-lbs. on hand sells at 15c. Extracted, 8@9c. No Beeswax on hand. No off grades in any way can be sold here.
BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.
R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and ½ barrels, 7½@8c.; in tin and kegs, 7@8½c.; dark, in barrels and ½ barrels, 6@6½c. Beeswax, 23@26c.
A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale; 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax—bright, 25@26c.; dark, 23@24c.
S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.; dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demadn good.
HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.
J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI, April 9.—Demand good for choice white comb honey at 12@15c.; dark is very slow sale. Extracted is in good demand at 5@8c. Stock is low.
Beeswax is in good demand at 22@25c. for good to choice yellow. C. F. MUTH & SON,
Corner Freeman & Central Aves.

Chapman Honey-Plant Seed.—This plant has been commended by some of the most experienced bee-keepers in America, as being "a most valuable acquisition to the list of bee-forage plants." The seed may be scattered in waste places, or it may be sown in drills or hills like onion seed. We can furnish the seed, postpaid, at the following prices: Single ounce, 40 cents; 4 ounces, $1.00; 10 ounces, $2.00; or one pound for $3.00.

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